

REMARKS

Claims 1-15 are all the claims pending in the application. Claims 1, 2, 4, 5, 7, 8 and 10-12 are now allowed, and claims 13-15 are added.

Claim Objections:

Claims 1 and 10 are objected to for the informalities noted in section 1 of the Office Action. Applicants address the issues raised by the Examiner and respectfully request withdrawal of the rejection.

35 U.S.C. § 103:

Claims 3, 6 and 9

Claims 3, 6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kiyota (U.S. Pat. No. 6,838,803) in view of Radomski (U.S. Pat No. 4,959,577). Claim 3 is drawn to a novel and unobvious brush abrasion detector including features neither taught nor suggested by the applied art.

To establish a *prima facie* case of obviousness, it must be shown that the prior art references, when combined, teach or suggest all of the claimed features. (See MPEP §2142.) Applicants respectfully submit that a *prima facie* case of obviousness is not established with regard to amended claim 3.

Claim 3 recites:

“A brush abrasion detector of a vehicle generator comprising: a brush that is located being slidably press-fitted to a slip ring, which is provided at an end portion of a field winding of a generator, and supplies an excitation current from a battery to

said field winding; a revolution speed detection circuit for detecting the number of revolutions of said generator *at a time when the generator is generating power*; and a brush abrasion determination circuit determining an abrasion state of said brush based on the number of revolutions detected by said revolution speed detection circuit.”

Kiyota is applied for disclosing to detect brush abrasion. Applicants respectfully submit that Kiyota does not disclose the combination of features in amended claim 3. In particular, Kiyota discloses that when its direct current motor 4 is under an OFF condition or kept deenergized, a certain torque is transmitted from rear road wheels 3L and 3R to the motor 4 through differential gear 13, the OFF clutch 12 and speed reduction gear 11 (see col. 4, lines 43-47 of Kiyota.) When the brush of Kiyota is in its “normal” condition, the rotor of the motor is suppressed from rotation due to frictional forces applied from brush to a commutator 33 (see FIG. 3 and col. 4, lines 48-50 of Kiyota). However, when the brush becomes worn, the rotor of the motor 4 is forced to rotate because of a reduced friction force applied to commutator 33 from the brush (see col. 4, lines 50-53 of Kiyota.) Thus, by sensing such rotation of the rotor of the motor 4 at the time when clutch 12 is OFF, abrasion of the brush can be detected (see col. 4, lines 54-56 of Kiyota). Thus, Kiyota does not teach or suggest, for example, a revolution speed detection circuit for detecting the number of revolutions of said generator *at a time when the generator is generating power*. The application of Radomski also fails to teach or suggest the features of claim 3.

Accordingly, Applicants respectfully submit that the combination of Kiyota and Radomski fails to teach or suggest each feature found in claim 3, such that the rejection thereof

under 35 U.S.C. § 103(a) should be withdrawn. The rejection of claims 6 and 9 should likewise be withdrawn at least by virtue of their respective dependencies upon claim 3.

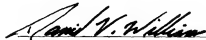
New Claims:

Applicants add new claims 13-15 to obtain more varied protection for the invention. Claims 13-15 are deemed allowable at least due to their dependency on claim 3.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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